DOCUMENT RESUME

ED 432 523 SO 030 995

AUTHOR Tunks, Jeanne L.
TITLE You Say Potato, I Say Potato: Implementation Strategies Used by Teachers.
PUB DATE 1999-04-00
NOTE 30p.; Paper presented at the Annual Meeting of the American Educational Research Association (Montreal, Quebec, Canada, April 19-23, 1999).
PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Curriculum Development; Curriculum Research; *Integrated Curriculum; Interdisciplinary Approach; Middle School Students; Middle Schools; Music Education; *Opera; *Teacher Attitudes; Teacher Surveys
IDENTIFIERS *Curriculum Implementation; Dallas Independent School District TX; Teaching Research; Texas (Dallas)

ABSTRACT

A study examined teachers' strategic use of a recommended curriculum through the lenses of the three perspectives of fidelity, mutual adaptability, and enactment. The recommended curriculum under consideration was an integrated curriculum developed to prepare middle school students to attend a performance of the opera "Turandot." For 40 years, the Dallas (Texas) Opera has brought 13,000 students annually to live performances of traditional operas. In 1993 the Dallas Opera embraced the National Education Goals and changed its approach to creating instructional materials. The paradigm shift from music orientation to multi-disciplinary materials placed both the opera education department and the teachers using the curriculum in a position of change management. The new materials were roundly criticized by teachers at first, but after staff development, following the fourth implementation of opera curriculum (for "Turandot"), the study was conducted to determine the level of implementation of the materials. Teachers of all teaching areas responded to a survey. A brief summary of teachers' written responses indicated that the materials met with satisfaction from the teachers. The curriculum's design recommends implementation by a team of discipline-based teachers. Results align with current curriculum implementation perspectives. Most teachers elected to use an adapted approach to the curriculum, several applied fidelity principles, and even fewer created new approaches through an enactment procedure. Contains 7 tables of data and 24 references. (BT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 432 523

You Say Potato, I Say Potato: Implementation Strategies Used by Teachers

Paper presented at
American Education Research Association
1999 annual conference
Montreal, Canada

Jeanne L. Tunks, Ph.D.
University of North Texas

Contact Information

2359 Greenland Dr.
Dallas, TX 75228
ph/fx 214-328-7201
email JTunks@aol.com

SO 030 995

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

Jeanne L. Tunks

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

You Say Potato, I Say Potato: Implementation Strategies Used by Teachers

Implementing curriculum mandates some level of change for teachers, students, and institutions. Whether curriculum emanates from an outside source such as state, district, workshop, or community service providers or from teachers and administrators, change and the management of change become the unit of study (Snyder, 1992). Curriculum implementation research examines changes ranging from comprehensive commitment to the design to reconstruction and/or dismissal (Snyder, 1992). Researchers of the phenomenon study the range of effective change as teachers implement either recommended or self-constructed curriculum.

Curriculum implementation studies initially examined the fidelity to which implementers adhered to the intent of the curriculum designer. The studies considered fidelity to content and intent, giving limited concern for the influence of context and environment. Most studies yielded limited, if any allegiance to the recommendations of curriculum designers (Kimpston, 1985; Akkar, 1988; Watkins, 1983; Carter, 1988; Marsh 1989; Hall, 1977, Louis, 1988).

The plethora of supporting evidence suggested that implementers adapted or adjusted curriculum to accommodate the context of instruction. Later studies considered mutually adapted curriculum from the perspective of context and environment influence on implementers' fealty to the curriculum design. Curriculum under investigation originated from sources outside the implementing environment. Several prominent studies in mutually adapted curriculum implementation (Watkins, 1983; Hunkins and Ornstein, 1989; Popkewitz, 1981; Berman, 1981; Fullan, 1983) examined the sociological implications of involving teachers and school personnel in the process of mutually adapting recommended curriculum. Both studies demonstrate that the issue of fidelity remains inert and the addition of school personnel as key to the decision making process resulted in conflict, political strife, and at times, success.

An examination of mutually adapted curricular circumstances indicates discord between curriculum specialists and implementers, in spite of the mutually adaptive agreement (Berman, 1981). Building on the findings of the Rand and IGE reports Paris (1989) suggests that the responsibility for curriculum development and subsequent implementation lies within the context and perception of the context of the implementers. Consequently, quiescent truths no longer hold from the perspective of curriculum enactment. Conclusions of an enactment study conducted by Busis, et al (1976) propose that teachers' success in implementing curriculum occurred when outside influence maintained a supportive, as opposed to a dominate role.

The three perspectives of fidelity, mutual adaptability, and enactment served as the basis for this study. The purpose of this study was to examine teachers' strategic use of a recommended curriculum through the lenses of the three perspectives. The recommended curriculum under consideration was an integrated curriculum developed to prepare middle school students to attend a performance of the opera *Turandot*.. A grounded approach of qualitative analysis was applied to the examination of the data (Miles and Huberman, 1994). The questions posed by the study were: Which kind of teachers used the curriculum (music, language arts, social studies, art)? What components of the curriculum did the teachers use? How did teachers elect to implement or not implement the components of the curriculum? What were teachers' attitudes toward the curriculum?

The A.R.I.A. Project - The Paradigm Shift

For forty years the Dallas Opera has brought 13,000 students annually to live performances of traditional operas. Students who attend the performances include a range of ethnically, culturally, economically, and educationally diverse populations. Teachers who bring students to the performance represent all disciplinary instructional areas taught in schools. Teachers interested in taking students to performances contact the opera company and request seats for their students. Seats are assigned on a first come/first serve basis without regard to any other decision factors.

Teachers of the students attending the performance traditionally receive materials designed to prepare students for the upcoming performance. Until until 1993, the materials sent to teachers consisted of a teacher guide, student newspaper, audio-cassette, and video cassette. The content of the teachers' guide consisted of a synopsis of the opera, information about the composer, playlets from scenes in the opera, and crossword puzzles and word searches for the students, all of which emphasized the opera as a purely musical event. The evaluation of the materials and their use began in 1988. Teachers and students were asked to state what they liked and disliked about the performance, who was their favorite singer, what was their favorite part about the trip, and would they like to see another opera one day. The responses to the evaluations indicated that students enjoyed the experience and hoped to attend another opera. This form of evaluation of the student and teacher interaction with the content of the materials and the opera continued until 1993.

In 1993 The Dallas Opera education department altered its curriculum emphasis. Led by national efforts of Opera America (1996) to embrace the National Education Goals , the Dallas Opera changed its approach to creating instructional materials. The change involved a theoretical shift resulting in the consideration of opera as a literary piece constructed within a historical context in a geographical setting of some significance, told dramatically through music. In addition to the influence of Opera America, the company relied on educational reform research suggesting higher levels of student understanding of a concept, when presented from an in-depth multi-faceted approach (Tunks, 1997). This paradigm shift resulted in a multi-year research and development project.

The A.R.I.A. project (Arts Related Integration and Assessment) has three purposes. The first, the develop multi-disciplinary curriculum materials designed to prepare middle-school students for opera viewing, functions as the center piece of the project. The second purpose of the project focuses on teacher implementation of the materials. The final purpose, investigation of three things: curriculum implementation, student understanding, and design procedure provides guidance for improvement.

The paradigm shift from music orientation to multi-disciplinary materials placed both the opera education department and the teachers using the curriculum in a position of change management. Loucks, Hord, et al (1987) suggest that successful change management in education occurs when the components of the innovation are made known to all agents in the process. Music teachers, the primary users of the curriculum for thirty-three years, essentially, were encouraged to share the responsibility of preparing students for opera performances by including teachers with expertise in literature, history, geography, science, and math. No preparation for this shift ensued prior to the dissemination of the changed materials.

The education department began studying the effect of the shift in 1994 with materials developed for the opera *Madama Butterfly*. Instead of asking how they liked the opera, the teachers responded by examining each aspect of the new curriculum with regard to usability, function, value, and quality. In addition, teachers indicated, using a Likert scale, their willingness to implement the new materials and new approaches to preparing students for an opera performance. Overwhelmingly the teachers rejected the materials, claiming the multi-disciplinary materials were "blasphemous", "forsaking arts for arts sake", and "completely useless as preparatory materials" Several teachers posed the question as to why music teachers should have to "teach all the subjects, such as social studies and language arts, in addition to music". Many claimed that "they had enough to do already."

The general negative reaction prompted the A.R.I.A. project coordinators to reconsider their approach to implementation. With the knowledge that successful change requires three to five years of vigilant care (Hord, 1989), the coordinators persevered in preparing quality materials, but added the dimension of staff development. Staff development consisted of a single four hour presentation of the materials following the guidelines for interdisciplinary integration suggested by Jacobs (1989) wherein each discipline remains autonomous while contributing to the total understanding of the concept,

in this case the opera *Carmen.* Teams of teachers representing three to five of the disciplines included in the five discipline materials were shown how each discipline contributed to the understanding of the opera. Approximately one hundred-eighty teachers brought students to the opera *Carmen,* but only 90 attended the full workshop. The remaining attended two hour, thirty minute or no workshops. All teachers attended the performance with the 13,000 students.

Following the performance of *Carmen*, several forms of evaluation were implemented to determine the level of acceptance of the innovation. Teachers, surveyed about their attitude toward the innovation offered recommendations for improvement. An analysis of the responses indicated that teachers who attended longer sessions of staff development rated the materials usable and desirable (Tunks, 1996). Structured interviews with students whose teachers used the materials demonstrated high levels of understanding of the opera, the social context, and the literary implications inherent in the opera. However, teachers who elected not to attend training or limited hours of training continued to condemn, and in some cases, remove their students from attending the student performances of the opera. The impact of staff development on teacher attitude suggests staff development positively impacted teachers' attitudes toward the multi-disciplinary construction of the materials. Following the fourth implementation of opera curriculum, for the opera *Turandot*, this study was conducted to determine the level of implementation of the materials.

Method

The instrument used to measure implementation of the *Turandot* curriculum was a survey. The survey was a self-reporting mechanism mailed to all teachers who attended staff development and brought students to the opera student performance. One-hundred eighty-four teachers received surveys. Of these, one hundred seven responded to the survey. With over 59% of the teachers reporting, the data were considered representative of the population. An examination of research methodology associated with curriclum

implementation study indicates that survey is used primarily with fidelity studies, whereas interview and observation are applied in mutual adaptation and enactment studies (Snyder, 1992). However, due to the somewhat intrusive nature of observation and interview, coupled with the non-institutional standing of the opera company, the research decision to maintain a slight distance guided the decision to use survey to ascertain levels of curriculum implementation.

The instrument consisted of four sections. The first section covered demographic information such as grade level, teaching area, time spent in staff development, shared use, and timing on materials receipt. In the second section teachers indicated their level of implementation of each component of the curricular materials. The materials consisted of a teaching guide, student newspaper, guided CD, video tape, art slides, and a board game. The third section requested the teachers to consider the clarity of each component. In the second and third sections, teachers used ICC matrix decision tools (Hord, 1989) and Likert scales respectively to report implementation and perception of clarity. Finally, teachers openly commented on the materials and the amount of time they had to implement the materials.

Response choices directed teachers to indicate their level of implementation for each component of the materials. Responses to implementation of the teaching guide included: as recommended, in an adapted format, selected pieces, ideas but not instructional methods, and did not use. For the newspaper the choices included: as recommended, selected pieces, for class discussion, distributed to students, and did not use. For the instructional video and compact disk teachers responded to the options: as recommended, selected pieces, opera portion only, played straight through, and did not use. Their responses to the implementation of the art slides included: as recommended, selected pieces, as examples of Chinese art, showed slides, did not use. The board game implementation was rated: as recommended, as indicated, but without discussion, as

recreation, as a poster or bulletin board, and did not use. All components were rated for clarity using the indicators of excellent, good, adequate, poor and unacceptable,

Each of the fives levels across all components implemented represented the three perspectives of curriculum implementation. In all component analysis the first category represented fidelity. The second and third represented mutual adaptability. The fourth category for the teaching guide represented enactment. The fourth category in all other components represented a level of tacit use, essentially without instruction. The fifth category gave teachers the freedom to inform about non-use of a component.

The Opera Turandot

The opera Turandot, set in China in the 6th c., finds the city of Bejing in an uproar over the princess' marital status. She refuses to marry because of an incident that occurred centuries before to a female ancestor who suffered abuse at the hand of men. However, as the emperor ages, he encourages Turandot to find a suitable husband. His advisors, Ping, Pang, and Pong warn him that without an heir, doom lurks over China.

To appease her father, Turandot arranges for suitors to ask for her hand in marriage. Each prince must ring the gong three times, enter the gate, and answer three riddles. The answer to the riddles, hope, blood, and Turandot, remain secret to the princess. An incorrect answer affords the loss of life by beheading. All heads, displayed as trophies along the palace gate warn suitors of their impending doom, lest they try the same. Thus begins the opera, with the death of the Prince of Persia pending.

However, the story continues beyond this prince to another. The viewer/listener meets an old, blind man and his hand maiden, Liu. They escaped tyranny in the neighboring Tartar, in hopes of finding refuge in Bejing. Unfortunately, in the melee the old gentleman lost his son, Calaf, the Prince of Tartar. In the shadow of the death, outside the gate of the palace, they discover each other again. The reunion, marred by Calaf's desire to put his life on the line for Turandot, weighs on the father's slave, Lui, who secretly loves Calaf.

Undaunted by previous suitors' deaths, Calaf rings the gong thrice. Turandot appears and the riddles read from the seemingly endless scroll. As he answers each answer correctly, Turandot grows weaker and colder. Calaf, enamored, with her beauty and mystique, provides an opportunity for her recovery. He offers his head on a stake should she guess his name. With this reprieve, Turandot wakes the city and commands that no one sleep until his name becomes known.

Liu, tortured by guards, at the foot of Turandot, refuses, out of love, to give his name. She commits suicide to avoid betraying him for Turandot's sake. Turandot, moved by such passion, melts slightly. Her duet with Calaf testifies to her impending break from isolation. In the morning, she announces that she knows his name. And his name is Love.

The Dallas Opera Instructional Materials - Turandot

Employing Palmer's (1995) planning wheel model for integrating curriculum a team of middle-school classroom teachers, a curriculum consultant, and the opera education staff constructed an multi-disciplinary curriculum. The opera Turandot became the center of the planning wheel (fig 2). Teacher/designers from the six disciplines of music, art, science, math, literature, and history/geography considered the story, setting, content, and intent of the opera from the perspective of each disciplinary contribution to the understanding of the opera.

Using Pate's (1995) cultural curriculum guidelines fig 3., teacher/designers created materials that reflected the cultural aspects of Chinese culture in the 6th c. A.D. The music part of the curriculum presented both Western music and Chinese musical idioms and instrumentation used by Puccini. In visual art the recommended A.R.I.A. curriculum took students through the exploration of porcelain guardian figures, calligraphy, and Chinese symbolism. Because of the use of riddles, the literary section of the curriculum explored the development of riddles through an understanding of metaphor. In addition, Chinese poetry, symbolism in language, and the literary elements of storytelling as related to the story of Turandot were also recommended. Through directive reading students were taken

on a tour of the history of China and introduced to the three major philosophies and religions. In addition, a simulation, created in the form of a board game engaged students in the travels of the silk road, as the Prince of Persia may have experienced it in the 6th c. The science section of the curriculum focused on paper making, silk worm farming, and sound production through Chinese flute making. Students could create sets using photographs and set specifications of actual opera sets used in the Dallas production of the opera Turandot. The mathematics used to create the sets included ratio, proportion, and geometry. Other mathematics learning involved the study of the Zodiac calendar, mentioned by Ping, Pang, and Pong, to determine the actual year in which the opera is set.

Supplemental materials accompanied the teachers' guide. The guided compact disk included musical information related to the musical instruction and science instruction. Complementing the CD were guided listening response sheets for students. The video tape included arias, recitatives, duets, and quartets from the opera. Also included on the video were step by step instructions on calligraphy technique, panoramic views of sculptures, and examples of Chinese symbols imbedded in Chinese art, clothing, and architecture. Chinese poetry accompanied by video footage of Chinese art and scenery are also part of the video. Finally, close-up views of the set were shown in detail from both close-up shots and shots taken from an audience perspective. Each student received a newspaper that they used for research for the different disciplines. Four art slides provided a still life study of guardian figures and Chinese symbols. Finally, a game board depicting the various routes that challenged the travelers of the silk road, provided four players of the game to assume the roles of pilgrim, merchant, refugee, and spy experiencing the consequences of route choice as related to their role. Included in the teachers' guide were student response sheets that challenged the students to observe, listen, create, predict, hypothesize, and imagine within and across all disciplines.

The final piece that served as the culminating activity following all instruction across all disciplines was a performance assessment. In the assessment the student, placed

in the role of Calaf, finds an unfinished diary in a secret tower of the palace. The keeper of the diary, the Prince of Persia, who lost his head at the start of the opera partially describes the wonders of the silk road in his travels from Bagdad to Bejing. The students' complete the journal entries for Calaf. Each journal entry relates to a summary of content introduced in each discipline. A set of rubrics that follow the guidelines prescribed by Marzano (1993) delineate criteria for success.

Due to the complexity of the curriculum, teams of teachers were encouraged to attend a four hour staff development session. During staff development teams explored the materials and myriad of possibilities for introducing students to the world of China, opera, and the ice princess (Turandot). Teams, encouraged to use the curriculum as designed, discussed and decided on approaches to vertical planning (Jacobs, 1993). Following the workshop teachers returned to their respective schools and implemented curriculum. Following implementation, teachers took their students to a live performance of the opera. The curriculum included numerous options for follow-through after the performance. In a survey, mailed to teachers two months following the performance, teachers indicated their level of implementation of the curriculum

Results of the Survey

The survey data were analyzed using simple descriptive statistics. Frequency and means are reported for each category. The results were considered from the perspective of the questions posed. The questions posed by the study were: Which kind of teachers used the curriculum (music, language arts, social studies, art,)? What components of the curriculum did the teachers use? How did teachers elect to implement or not implement the disciplinary parts of the curriculum? What were teachers' attitudes toward the curriculum? The results are presented as responses to these questions.

Teachers of all teaching areas were represented in the data. Of the teachers reporting over 56% were music teachers. Two other types of teachers represented 28% of those responding. General classroom teachers and social studies teachers represented 15%

and 13%, respectively. Science, math, visual art, and language arts teachers represented one, three, six, and six percent of the teachers reporting.

Teachers across all teaching areas used all components of the curriculum. Some components were more frequently used than others. The teaching guide and the student newspaper were used by 100% of the teachers reporting. The video was used by 90% of the teachers reporting. The CD was used by 85% of the teachers reporting. The slides and game were used by fewer than 30% of the teachers reporting. Clarity of the components were rated overall as excellent with 20% rating the clarity as good, 4% as adequate, and 1% as poor. Fewer than 1% rated the game as unacceptable. A closer look at the data indicate that the one person rating the game unacceptable also reported that they did not use the game.

Data indicating implementation strategies ranged across all three perspectives as well as non-instructional or non-use. The results of implementation are summarized in two forms: aggregate, across all teaching areas and disaggregate, within teaching areas. Each component is presented separately with respect to both forms of reporting. Table 1 represents the aggregate data of the implementation of the teaching guide, the implementation perspective, and the percentage of teachers reporting that level of implementation for the disciplines within the teaching guide. Tables 2-7 represent the disaggregated data representing teaching areas across the same variables.

Insert Table 1 here

A summary of tables 1 shows that all disciplines in the teaching guide were used by teachers. By far, the discipline of music was most prevalently used. This coincides with the 56% of the reporting teachers registered as music teachers. The average of the percentage of teachers reporting implementing the curriculum from a fidelity perspective was 10%. In contrast, 29% reported using the curriculum in an adapted form.

Approximately reported using the curriculum from the enactment perspective. An average of 19% did not use the curriculum, the majority falling within the math and science discipline areas. These data support previous findings that indicate that few, if any curricula are implemented with fidelity. The majority of implementers adapt curricula to their context. Few elect to create their own path for reconstructing curriculum.

Disaggregating the data by teacher area of instruction yielded similar patterns of implementation. Interestingly, teachers in all disciplines showed implementation across all disciplines. Music teachers' responses, shown in table 2, indicated commitment to teaching the music component of the curriculum with 63% using mutual adaptive strategies and only 21% maintaining fidelity. In addition, an average of 17.5% indicated that they implemented curriculum in the literature, visual art, and history/geography disciplines using fidelity or enactment strategies in these disciplines. According to the data, few music teachers, less than 6%, incorporated math or science into their instructional preparation for the opera. Non-use among music teachers was most prevalent in all subjects except music, where only 12% reported non-use of the music component of the curriculum.

Insert Table 2 here

Music teachers represented 58% of the population of respondents. Indications of their use of multiple parts of the curriculum suggests a slight willingness on their part to recognize the multi-disciplinary design of the curriculum as a valid approach to preparing students for attending an opera performance. The paradigm shift for the A.R.I.A. team, as indicated by these descriptive statistics suggests that music teachers were beginning to shift their approach toward the materials. This result was particularly important to the A.R.I.A. team for the purpose of continued development and improvement.

Results in table 3 show the implementation strategies of the second largest population reporting, classroom teachers. Classroom teachers used a balanced approach to the implementation of the curriculum. Approximately 30% used the music and literature components with fidelity. Those who reported mutual adaptation implementation strategies reported an average of 37% across all six disciplines. Across four disciplines, music literature, visual art and history/geography, classroom teachers reported a rate of 13% enactment strategies. Fewer than 10% reported enactment for math and science. Across all disciplines, classroom teachers' average reported non-use was 21%.

Insert Table 3 here

Most classroom teachers reporting taught in self-contained classrooms where they taught all subjects daily. An interesting observation is the level of fidelity to the recommended curriculum in the areas of music (33%), literature (27%) and visual art (20%) as compared to the lack of fidelity in math (0%), science (7%), and history/geography (7%). The implication was that classroom teachers depended on the recommendations of the A.R.I.A. team to organize instruction. It could possibly be inferred that their level of expertise in these areas required that they rely on an outside source, such as the recommended curriculum to guide their instruction. The high levels of implementation across all disciplines at the mutual adaptation level suggests that approximately one-third of the teachers understood the intent of the curriculum enough to convert it to their context. The limited percentage who were willing to use the ideas and create curriculum on their own suggests a need to use the guidance of the curriculum to convey knowledge and skills.

Results of literature teachers' level of implementation are noted in table 4. Data indicate that teachers operated primarily on a mutual adaptation level across all disciplines.

However, the disciplines garnering the most attention from literature teachers were music (50%), literature (67%), and history/geography (34%). Approximately 16.5% showed a mutual adaptation level of implementation across the disciplines of math, visual art, and science. Fidelity to the curriculum was noted in literature and history/geography (17%) and visual art (9%). Only in visual art did literature teachers report enactment, and it was less than 5%. An average of 35% of the literature teachers reporting did not respond across all categories.

Insert Table 4 here

The findings suggest that the music and history/geography parts of the curriculum provided material for learning that aligned with literature learning objectives. A closer examination of the music and history/geography sections of the curriculum reveals a high level of literary challenges in reading comprehension, journal writing, expository writing, summary of text, story development, and related literary expectations. The visual art, math, and science components require skills in the three areas that result in the construction of sets, creation of Zodiac calendars, and the making of paper and silk colonies. There are limited literary challenges other than reading directions. Consequently, it would stand to reason that the literature teachers would elect to use the components they chose.

History/geography (social studies) teachers' results are found in table 5. Across all teachers responding overwhelmingly, on the average of 70% indicated the use of a mutual adaptation level of curriculum implementation. This group reported using the science component more than any other. The data show that basically they either mutually adapted the curriculum or they did not respond to the category. Seventeen percent reported fidelity to the literature and visual art components respectively. Seventeen percent reported employing an enactment strategy in music and visual art. In all disciplines social studies

teachers reported no fidelity or enactment strategies. In math, science, and history/geography an average of 28% of the teachers reported non-use of math, science, and history/geography.

Insert Table 5 here

The history/geography teachers reporting showed a balanced use of the curriculum. It was apparent that teachers adapted the curriculum to suit their context. It was interesting that none felt compelled to follow the history/geography with any fidelity or enactment strategies. The implication is that they know what they have to teach in history and geography and how they want to teach, consequently they adapted to accommodate their needs.

The group of teachers reporting as other representing 13% of all teachers reporting consisted of counselors, librarians, special education, home-schooling, principals, physical education, and possibly other types of teachers. Data detailing responses for this group are found in table 6. As with all other groups, this group also elected to use the curriculum in an adapted manner with an average of 30% implementing at this level across all discipline areas. However, 46% and 31% reported using the music and history/geography sections at a fidelity level. Fewer than 10% used the enactment strategy in an discipline. Approximately 40% reported non-use of all components of the curriculum.

Insert Table 6 here

The high level of fidelity in both music and social studies indicates a need on the part of the "other" teachers to have some structured approach to the material. However, as

is noted in the reporting of 53% using the literature section in adapted manner, "other" teachers appear to have a grasp of literary objectives and were able to tailor the curriculum to their context. The limited election to enact, take ideas and reshape them, suggests that "other" teachers are not confident in their own skills to create or design renewed curriculum.

Due to the limited number of visual art, math, and science teachers reporting (1% or less) data analysis was unwarranted. It can be inferred from the non-response of these types of teachers that few, if any, used the curriculum. The implication, that visual art, math, and science teachers did not participate as members of the multi-disciplinary team to prepare students for the opera, becomes apparent in the minimal response from this population.

Finally, teachers rated the quality of the components of the curriculum, the teaching guide and all of the ancillary components. Teachers rated each component using the Likert indicators of excellent, good, adequate, poor, and unacceptable. The results suggest an overall acceptance of the materials. Table 7 shows the responses by component and categorical rating.

Insert Table 7 here

Teachers, overall, rated the components favorably. Over 50% of the teachers rated the teacher guide, compact disk, student newspaper, and video as excellent. The silk road game received a rating of excellent from 18% of the teachers. Again, with the exception of the silk road game, which garnered a rating of good from 7% of those responding, the other components were rated good by an average of 17% of the teachers. Fewer than 10% of the teachers rated any of the components as either adequate or poor. Whereas the compact disk and the silk road game received ratings of unacceptable by 2% and 5% of

those responding. It is interesting to note that the silk road game road game received such low ratings when so few teachers reporting used the game for anything other than a bulletin board decoration or not at all.

A brief summary of teachers' written responses indicated that the materials met with satisfaction from the teachers. Their comments focused on the amount of time they had for implementing the curriculum following the staff development training. Only 16% of the teachers responding attended staff development more than thirty days prior to the performance. Of the remaining teachers, 46% received their materials thirty day prior followed by 20% who received them 21 days in advance of the performance. Approximately 19% had the materials to work with in preparation for less than twenty-one days.

These data play an important role in clarifying the implementation strategies reported. In essence, the majority of the teachers had thirty days or less to implement a curriculum designed to encompass six to eight weeks, if implemented with fidelity. These time restraints serve as the catalyst to adapt. Minimal time could also contribute the small percentage of teachers who chose to implement on an enactment level. With more time teachers could experiment and create new instructional approaches.

The curriculum's design recommends implementation by a team of discipline-based teachers. Results of the survey indicate that 53% of the teachers reporting presented the instruction in isolation. Due to the discipline-based aspect of each part of the curriculum, the data support the need for an adapted implementation strategy. Twenty-nine percent reported working with at least one other person and in 11% of the cases teachers reported working in a team of three or more teachers. Only 6% reported not using the curriculum at all. None the less, these 6% elected to rate the materials, in most cases in the lower categories.

Implications

The results of align with current curriculum implementation perspectives. Most teachers elected to use an adapted approach to the curriculum, several applied fidelity principals, and even fewer created new approaches through an enactment procedure. However, the methodology in this study departs from those described by Snyder (1992), but the method suited both the context and the purpose. The research methods described used survey methodology at the fidelity level only. However, the survey methodology employed in this study accounted for context and personal choice adjustments used in mutual adaptation and enactment studies. The context, a community arts education provider designing curriculum and researching the use of the components of its recommended curriculum, mitigates against observations and interviews in the second year of a long-term research agenda. The results of the study answer the questions posed in the purpose, to ascertain implementation strategies of teachers using a recommended curriculum generated outside the educational setting.

The results informed the researchers that several different types of teachers from different used the curriculum. By fidelity standards regarding teams of teachers using the curriculum, the teachers vacillated between adaptability and fidelity. With as many teachers who reported working in teams the implication is that many students experienced the richness that this multi-disciplinary curriculum offered. For the purposes of students gaining more knowledge delivered by experts in the field, fealty to the teaming design provided that vehicle.

In spite of the faithfulness to the teaming aspect of the curriculum, with over half the teachers using the curriculum in isolation, concerns about the depth of students' preparation emerged. A closer examination of the results suggests that teachers across all disciplines, even when acting alone, used many of the disciplinary areas regularly. This adapted approach suggests a willingness on the teachers' parts to take a transdisciplinary view of the curriculum, crossing lines beyond their discipline to the focus of study, the world and times of Turandot in ancient China.

Although teachers from all disciplines used the curriculum, certain components of the curriculum garnered more use than others. The extended use of the teacher's guide, student newspaper, CD, and video match previous use levels. These components have been part of the instructional series for many years. The inclusion of slides and a board game garnered limited attention. Further investigation into the written comments suggests that teachers no longer have access to slide projectors, other than through acquisition requests of the librarian. This amount of extra work seemed beyond the teachers responding. In addition, the limited time precluded teachers timing in arranging projectors. Poor equipment structuring of the silk road game proscribed the use of the game. The game pieces were imbedded in the text of the curriculum, no game pieces were available, no die were provided, and the game board was an unhandy size. Teachers had difficulty understanding the simulation nature of the game and viewed it as decoration instead. All of the choices suggests that teachers felt at ease using the components with which they held a reasonable comfort level.

The prevalence of the mutual adaptation level of implementation of the teacher's guide implies that teachers felt a sense of ownership of the curriculum. At this juncture in the long-term research agenda, teachers using the curriculum willingly at any level indicates a slight shift from crossword puzzles toward meaningful learning. At the four year mark of paradigm shifting toward an exploratory examination of opera as a multi-disciplinary perspective, the result of the responses indicates support for the initial change. The findings imply that teachers' comfort levels may be elevated to the point of encouraging interview and possibly observation in the near future.

Comparing the hostility of teachers' responses following the initial shift, with the opera *Madama Butterfly* and the overwhelming ratings of excellent and good for Turandot, implications of improved attitude become apparent. The shift in attitude appeared one year earlier following the opera Carmen, the first year of staff development. With a second year of staff development in place and the fourth product in a multi-disciplinary format, teachers

began to accept that a change had occurred. By indications of the results of the survey, they embraced the change and welcomed the opportunity to use the materials.

Conclusions

This study informs the curriculum implementation field of study in several ways. The grounded approach allowed the researchers to examine openly the potential for all possible implementation strategies. By using this approach, a more expanded perspective unfolds and provides comparatives. The freedom to implement curriculum as they elected based on situational context, knowledge of discipline, and time constraints differed from other implementation studies. In other studies described by Snyder (1992) resistance to an outside source seemed apparent. In this study, teachers were under no obligation to implement with fidelity, mutually adapt, or create their own through enactment. This study provides a fresh look at educating through a focus of an art form as the center of instruction. Leornard Bernstein encouraged artful learning which examines learning within and across disciplines through the powerful lens of art.

In addition to the contributions to the literature, in a more practical way, the findings provided the A.R.I.A. curriculum development team with valuable information for decision making as they approached material development for the opera *La bohème*. Developers used the findings to examine unused components of the materials for strategizing new approaches or elimination of component parts. The findings brought the team clarity of purpose and vision for improvement.

Research in curriculum implementation serves as a decision making tool for curriculum developers. The findings provide a bridge between curricular theory and practice. The ultimate goal of curricular development, increased knowledge and skills among learners through a systematic approach to subject matter presentation, emerges as a reality through self-examination. A self-study of curriculum implementation provides the designer with guidance in further construction of curriculum. This study supported the standard fidelity/mutual adaptation strategies for curriculum implementation. However,

further study of the enactment strategy would provide the field with a greater understanding of the potential of teachers and students as leaders of their own destiny.

References

Akkar, V. D. (1988). The teacher as learner in curriculum implementation. Journal of Curriculum Studies, 20, (1), 47-55.

Berman, P. (1981). Toward an implementation paradigm. "In Improving Schools, edited by R. Lehming and M. Kane. Beverly Hills, CA: Sage Publications.Berman (as cited in Snyder, 1992)

Bussis, A., Chittenden, E. and Amarel, M. (1976). Beyond surface curriculum: an interview study of teachers' understandings. Boulder, CO: Westview Press. (as cited in Snyder, 1992)

Carter, D., and Hacker,D. (1988). A study of the efficacy of a centre-periphery curriculum implementation strategy. Journal of Curriculum Studies, 20, (6), 549-52.

Cho, J. (1998) Rethinking curriculum implementation; paradigms, model and teachers' work. Paper presented at the American Educational Research Association Annual Conference. San Diego, California. April 1998.

Cross, B. (1995). The case for culturally coherent curriculum. In J.A. Beane (Ed.) Toward a coherent curriculum (p. 71-86). Alexandria, VA: Association for Supervision and Curriculum Development.

Fullan, M. and Pomfret, A. (1977). Research on curriculum implementation and instruction. Review of educational research, 47 (1), 335-397.

Hord, S., Rutherford, W., Austin, L. H., and Hall, G. (1987). Taking Charge of Change. Alexandria, VA: Association for Supervision and Curriculum Development.

Hunkins, F. and Ornstein, A. (1989). Curriculum innovation and implementation. Education and Urban Society, 22, (1), 105-114.

Jacobs, H.H. (1989). Interdisciplinary curriculum: design and implementation. (Ed. Heidi Jacobs). Alexandria, VA: Association for Supervision and Curriculum Development.

Kimpston, R. (1985). Curriculum fidelity and the implementation taks employed by teachers: a research study. Journal of Curriculum Studies, 17, (2), 185-195.

Louis, K. and Dentler, R. (1988). Knowledge and use of school improvement. Curriculum Inquiry, 18, (1), 33-62.

Marsh, C. (1987). Implementation of a social studies curriculum in an Australian elementary school. The Elementary School Journal, 87,(4), 475-486.

Marzano, R., Pickering, D., and McTighe, J. (1993). Assessing student outcomes: performance assessment using the dimensions of learning model. Alexandria, VA: Association for Supervision and Curriculum Development.

McLaughlin, M. and Marsh D. (1977) Staff development and school change. Teachers college record, 80 (1), 69-94.

Miles, M. and Huberman, A. M. (1994). Qualitative data analysis. Thousand Oaks, CA: Sage Publications, Inc.

Palmer, J. (1995). Interdisciplinary curriculum - again. In J.A. Beane (Ed.) Toward a coherent curriculum (p. 55-61). Alexandria, VA: Association for Supervision and Curriculum Development.

Paris, C. (1989). Contexts of curriculum change: conflict and consonance. Paper presented at the American Educational Research Association, San Francisco, CA. Paris' study (as cited in Snyder, 1992)

Popkewitz, T., Tabachnick, R., and Weglage, G. The myth of educational reform: a study of school responses to a program change. Madison: University of Wisconsin Press. Popkewitz, Tabachnick, and Weglage (as cited in Snyder, 1992)

Snyder, J., Bolin, F., and Zumwalt, K. (1992). Curriculum implementation. In P. Jackson (Ed.), Handbook of research on curriculum, 402 - 435. New York: Macmillan.

Hall, G. and Loucks, S. (1977). A developmetnal model for determining wherher a treatment is actually implemented. American Education Research Journal, 14, (3), 263-276.

Tunks, J. (1996) Mi carmen, su carmen. Paper presented at the annual conference of the American Association for Teaching and Curriculum, Indianapolis, Indiana.

Tunks, J. (1997). The final report: the partnership assessment project. Paper presented at the annual conference of the American Association for Teaching and Curriculum, San Antonio, Texas.

Watkins, J. (1983). Monitoring curriculum implementation. NAASP Bulletin, 67, (467), 118-120.

_____ (1996). Opera America: Opera Education Agenda 2000. Literature circulated at the Opera America National Conference. Philadelphia, PA.

Table 1

Teaching guide implementation

		% of teachers reporting use by disciplinary instructional areas					
Category	Implementation Perspective	Music	Liter-ature	Vis Art	Math	Scienc e	History /Geo.
as recommended	fidelity	23	11	13	2	3	8
adapted/selected pieces used	mutual adaptation	50.5	31	29	16	17	28
ideas/but not instructional methods	enactment	3	5	5	2	3	3
non-use	non-use	5	14	13	29	29	17
missing data - no response in category		19	40	41	51	49	45

Table 2

Music teacher implementation of curriculum

		% of music teachers reporting implementation					
Category	Implementation Perspective	Music	Liter-ature	Vis Art	Math	Scienc e	History /Geo.
as recommended	fidelity	21	5	9	3.5	3.5	3.5
adapted/selected pieces used	mutual adaptation	63	19	16	2	4	19
ideas/but not instructional methods	enactment	.5	3.5	3.5	2	2	2
non-use	non-use	3.5	17.5	18	32	32	18
missing data - no response in category		12	54	54	61	60	58

Table 3

Classroom teacher implementation of curriculum

		% of classroom teachers reporting implementation					
Category	Implementation Perspective	Music	Liter-ature	Vis Art	Math	Scienc e	History /Geo.
as recommended	fidelity	33	27	20	0	7	7
adapted/selected pieces used	mutual adaptation	20	33	40	33	33	60
ideas/but not instructional methods	enactment	13	13	13	0	7	13
non-use	non-use	13	13	7	33	27	7
missing data - no response in category		20	13	20	33	27	13

Table 4

Literature teacher implementation of curriculum

		% of literature teachers reporting implementation					
Category	Implementation Perspective	Music	Liter-ature	Vis Art	Math	Scienc e	History /Geo.
as recommended	fidelity	0	17	9	0	0	17
adapted/selected pieces used	mutual adaptation	50	67	16	17	17	34
ideas/but not instructional methods	enactment	0	0	3.5	0	0	0
non-use	non-use	17	17	18	50	50	33
missing data - no response in category		0	33	54	33	33	17

Table 5

History/geography teacher implementation of curriculum

		% of hist/geo teachers reporting implementation					
Category	Implementation Perspective	Music	Liter-ature	Vis Art	Math	Science	History /Geo.
as recommended	fidelity	0	17	17	0	0	0
adapted/selected pieces used	mutual adaptation	67	67	67	67	83	67
ideas/but not instructional methods	enactment	17	0	17	0	0	0
non-use	non-use	0	17	0	0	0	0
missing data - no response in category		0	54	0	33	17	33

Table 6

Other teachers implementation of curriculum

		% of other teachers reporting implementation					
Category	Implementation Perspective	Music	Liter-ature	Vis Art	Math	Science	History /Geo.
as recommended	fidelity	46	15	9	0	0	31
adapted/selected pieces used	mutual adaptation	39	53	16	30	23	16
ideas/but not instructional methods	enactment	0	8	3.5	8	8	0
non-use	non-use	0	0	18	23	31	31
missing data - no response in category		15	23	54	39	39	23

Table 7

Aggregate teachers' ratings of components of the curricular materials. Results are presented as percentage of teachers' responding to each component and within each category.

Component	Excellent	Good	Adequate	Poor	Unacceptable	Non-response
Teaching guide	57	21	6	3	0	13
Compact Disk	59	16	1	2	2	20
Silk Road Game	18	7	10	7	5	45
Student Newspaper	64	18	3	1	0	15
Video	55	19	5	0	0	21